

## WHAT IS CLAIMED IS:

1. A process for *preparing aldehyde* having molecular weight in the range of 3000-5000 D from a proteinous material for industrial applications, said process comprising the steps of:

- i) subjecting the proteinous material to hydrolysis to obtain protein hydrolysate and sterilizing the protein hydrolysate to obtain sterilized protein hydrolysate,
- ii) treating the sterilized protein hydrolysate, as formed in step (i), with 0.25-0.5% w/w of alkyl halide for a time period in the range of 20-30 minutes at a pH of 6-7 and adjusting the pH of the same in the range of 3-5 to obtain an alcohol containing slurry,
- iii) reacting the alcohol containing slurry of step (ii), with 0.01 –0.5% w/w, of an organo-oxidising agent at a temperature in the range of 20-35°C followed by adjusting the pH of the resulting solution in the range of 5-7 to obtain an aldehyde containing solution.
- iv) separating the aldehyde containing solution, as formed in step (iii), to obtain aldehyde.

2. The process as claimed in claim 1, wherein the proteinous material used is selected from fleshings, skin trimmings or keratin.

3. The process as claimed in claim 1 wherein in step (i), the proteinous material is hydrolyzed by alkali hydrolysis, acid hydrolysis or enzymatic hydrolysis.

4. The process as claimed in claim 1 wherein in step (i), the hydrolyzed protein material is sterilized using gamma radiation, ultraviolet radiation or autoclaving.

5. The process as claimed in claim 1 wherein in step (iii) the organo-oxidizing agent used is selected from potassium permanganate, pyridinium chloro chromate or sodium hypochlorite.

6. The process as claimed in claim 1 wherein in step (iv), the aldehyde containing solution is separated using dialysis, resin absorption or ion exchange.

7. The process as claimed in claim 1, wherein the aldehyde thus obtained can be stored for more than 1 year.